



**NTSB** National Transportation Safety Board

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*Office of Aviation Safety*

# **Canadair Challenger**

## **November 28, 2004**

### **Montrose, Colorado**

Aircraft Operations

# Flight Crew Information

- Trained and qualified under Part 135 regulations
- No experience operating in winter weather conditions



# Winter Operations Procedures

- Ensure fuselage, wings, and tail are free from ice, snow, and frost
- Operator and Part 135 require a pretakeoff contamination check within 5 minutes before takeoff
- Airworthiness Directive requires **TACTILE INSPECTION**

# Winter Operations Issues

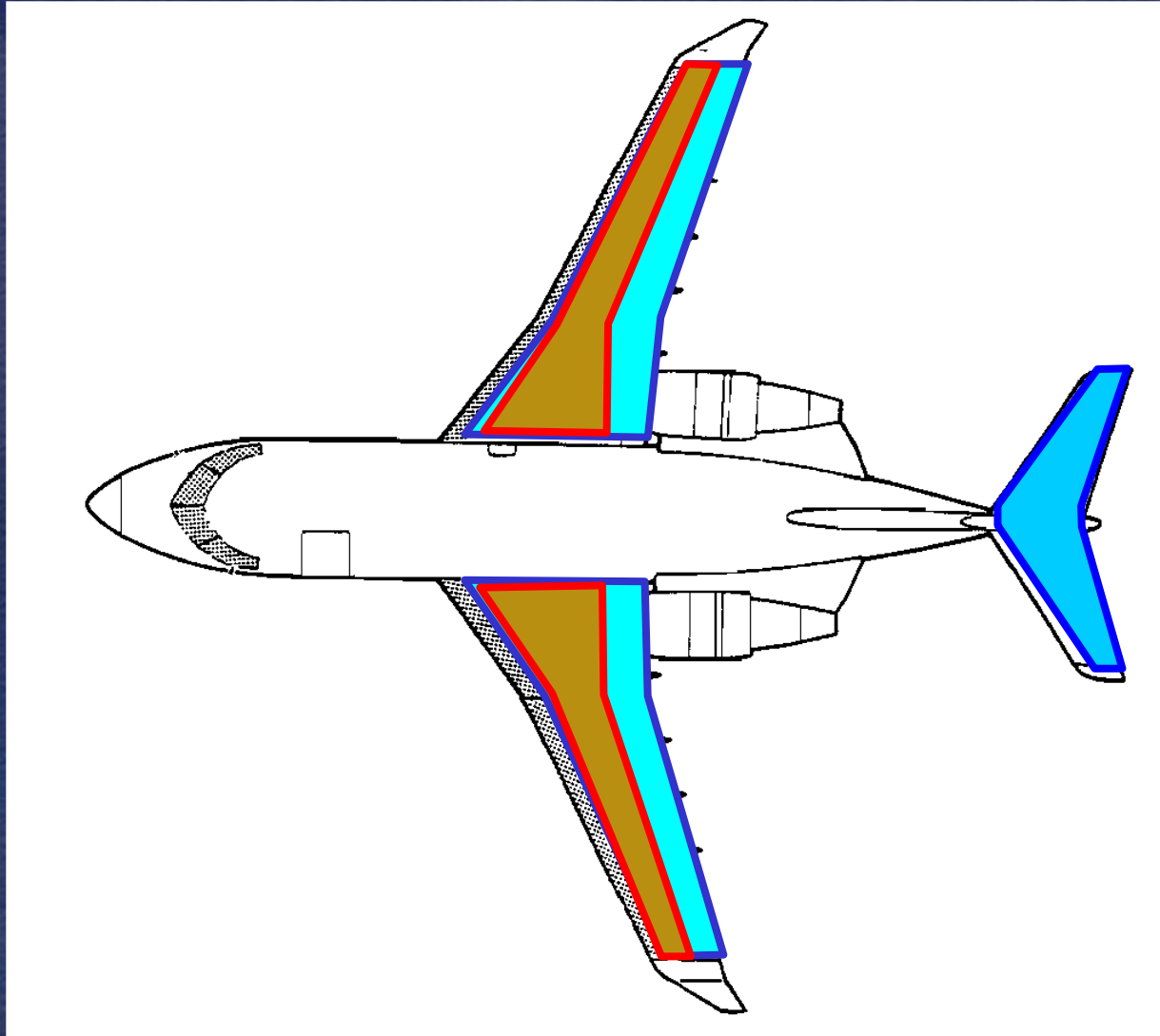
- Failure to inspect for upper wing surface contamination
- Failure to use deicing services

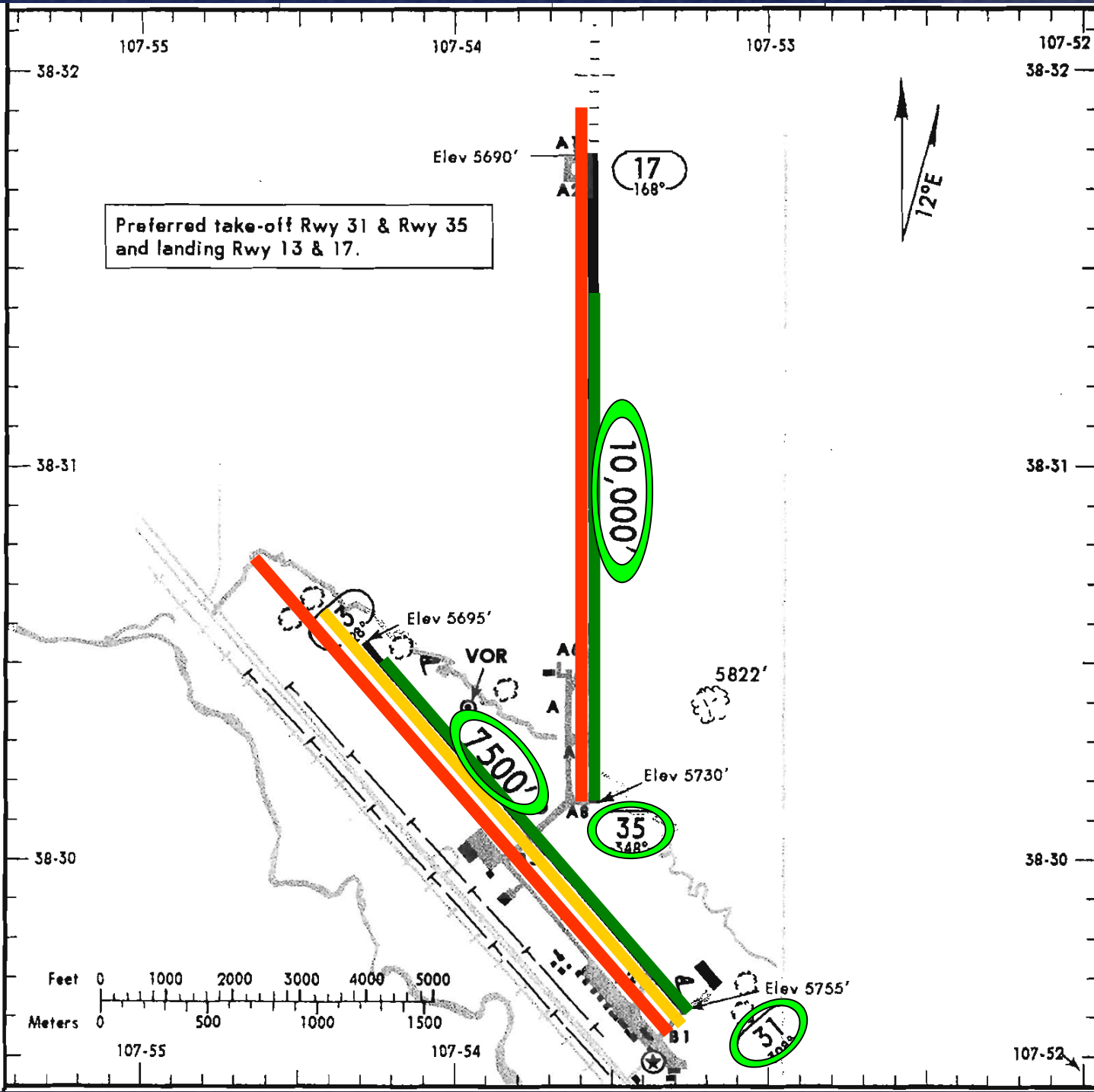


# Winter Operations Issues

- Fueling
  - Increased time spent on the ground during precipitation
  - Allowed cold-soaked fuel to come in contact with wing upper skin surface

# Upper Surfaces





Preferred take-off Rwy 31 & Rwy 35  
and landing Rwy 13 & 17.

Elev 5690'

17  
168°



10,000'

Elev 5695'

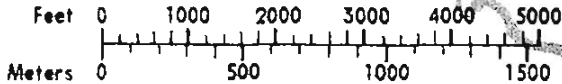
VOR

5822'

7500'

Elev 5730'

35  
348°



Elev 5755'

31  
348°



# CRM Deficiencies

- Captain
  - No preflight contamination inspection
  - Failure to use deicing services
  - Inappropriate airplane configuration
  - Poor performance planning
  - No takeoff briefing
- First Officer
  - Did not challenge captain's decisions



# CRM Training

- Part 135 operators are not required to train flight crewmembers in CRM
- Company provided some CRM training

# CRM Safety Recommendation

- Issued December 2, 2003
- Recommendation A-03-52
  - Require Part 135 on-demand charter operators to implement FAA-approved CRM training
  - Open–Acceptable Response





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